

REMARKS/ARGUMENTS

Status of the Oath and Declaration:

The Oath and Declaration stand objected to as allegedly not providing the city and state of the inventor.

Applicant filed a substitute oath and declaration on November 16, 2001. This Oath and Declaration was accompanied by an Application Data Sheet which set forth the residential address (city and state) of the inventor. Applicant provides copies of the filed documents.

Applicant submits that the provided due date is inapplicable as no Notice of Allowance was received or expected, given the outstanding rejections of the claimed subject matter.

Status of the Drawings and Remarks:

Figure 24 was objected to as lacking a figure number.

Applicant submits herewith a corrected drawing sheet setting forth the missing figure number (last page of the specification as filed). The numbering of the figure itself adds no new matter as the figure number was set forth in the Brief Description of the drawings which clearly describes and pertains to the subject of the last drawing.

In view of the above, Applicant respectfully requests that the above rejection be reconsidered and withdrawn.

Status of the Specification:

The specification was objected to with respect to trademark usage and various misspellings. Applicant has reviewed the specification and submits herewith amendments to correct the deficiencies.

Status of the Claims:

Claims 1-60 and 93-96 are pending and under examination. Claims 1-3, 13, 17, 18, 21-25, 27, 40, 51, 57, and 95 would be amended. Claim 103 is newly presented. The claims drawn

to unelected subject matter (claims 61-92 and 97-102) are canceled without prejudice. After entry of the amendments, claims 1-60, 93-96, and 103 would be pending.

Claims 1, 3, 22, 25, 51, 57, and 95 stand rejected under 35 U.S.C. §112 as being allegedly indefinite on various grounds.

Claims 1-38, 40-60, 93, and 96 stand rejected as allegedly anticipated by Ed Shipwash, *Physics*, Vol. 1, pp. 1-21 (August 10, 1999), under 35 U.S.C. §102(a).

Claim 39 stands rejected as allegedly being unpatentable under 35 U.S.C. §103(a) over Shipwash in view of VWR International "Molecular Size Exclusion Chromatography," pp. 1-2 (2000).

Claim 95 stands rejected as allegedly being unpatentable under 35 U.S.C. §103(a) over Shipwash in view of Demandolx, Microscopy and Analysis, 48:1-9 (1997).

Applicant responds to each of the above rejections below.

Support for Amendments to the Specification

Paragraph 188 would be amended for the purpose of correcting trademark usage related to the marks FLIPR[®], ACQUEST[™], and SPECTRAMAX GEMINI[®]. The term "microplate fluorometer" was inserted in two places to make the use generic. Support for the amendments is found in the original version of the paragraph.

Paragraph 189 would be amended to delete the reference to the objected to recital of the trademark TOPCOUNT[®]. Support for the amendments is found in the original version of the paragraph and the enclosed mark registration status report.

Paragraph 210 would be amended for the purpose of correcting trademark usage related to the marks TRITCG[™], RBITC[™], and TEXAS RED[™]. The terms TRITCG, RBITC, TEXAS RED, and TOPRO were deleted. TEXAS RED was replaced by the term "sulforhodamine 101 sulfonyl chloride." One of ordinary skill in the art would understand that TEXAS RED as used in the specification is sulforhodamine 101 sulfonyl chloride (*see* enclosed page from Sigma catalog). One of ordinary skill in the art would understand that Cy-5[™] and Cy3.5[™] cyanine dyes

are (water-soluble cyanine dye) (excitation maxima, 649/emission maxima, 670) and (water-soluble cyanine dye) (excitation maxima 581nm/ emission maxima, 596 nm), respectively. A typographical error would be corrected in the capitalization of "Thiazole," and "nm" would be added after "580" to clarify the units consistent with the rest of the paragraph. Support for the above amendments is found in the original version of the paragraph.

Paragraph 237 would be amended to correct typographical errors in the capitalization or spelling of "Affinity Tag" and "Hexa histidine." Support for the above amendments is found in the original version of the paragraph.

Paragraph 245 would be amended for the purpose of correcting trademark usage related to the term "FlowMetrix." The term was capitalized and the phrase "microfluorimetry system" was inserted after the term to render the usage non-generic. Applicant encloses a copy of the status report of the registration of the mark indicating it is used for microfluorimetry systems. The paragraph was also amended to remove the comma between "Luminex" and "Corp." Support for the above amendments is found in the original version of the paragraph.

Paragraph 250 would be deleted.

Paragraph 359 would be amended to delete the indicated recitals.

Paragraph 438 would be amended to delete the indicated recitals.

Paragraph 442 would be amended for the purposes of correcting trademark usage of the terms FLOWMETRIX™, LUMINEX®, and FACSCAN®. The phrase "flow cytometry" was inserted in the third line of paragraph 442 to make the usage of the first two terms non-generic. Applicant encloses a copy of the status report of the LUMINEX mark. A comma would be inserted between the words "analyzer" and "each", on line 17, to correct punctuation. Support for the above amendments is found in the original version of the paragraph.

Paragraph 450 would be amended to correct the spelling of "depends."

In view of the above, Applicant believes the proposed amendments add no new subject matter and respectfully requests their entry.

Support for Amendments to the Claims

Claim 1 would be amended to recite: "specifically detecting by biomolecular recognition a primary amino acid in a sample" and "whereby said primary amino acid is specifically detected by biomolecular recognition." Support for this subject matter is found *inter alia* in the title of the specification and the Abstract.

Claims 2 and 57 would be amended to recite "inorganic pyrophosphate" in place of "PPi" as suggested by the Examiner. Support is found in paragraph 106, at p. 19.

Claims 3, 25, and 57 would be amended to recite, as suggested by the Examiner, "aminoacyl-adenosine monophosphate" in place of "AA-AMP." AA-AMP represents amino acyl adenosine monophosphate as shown in the formula of paragraph 33, page 8.

Claim 13 would be amended to recite "wherein said contacting is with an aminoacyl tRNA synthetase for each of the 20 primary amino acids." Support is found *inter alia* in original claim 13 and original claim 17.

Claim 17 would be amended to recite:

The method of claim 4, wherein said sample is contacted with a plurality of aminoacyl tRNA synthetases, wherein each synthetase of said plurality of synthetases is cognate to a different primary amino acid of said plurality of primary amino acids in said sample, to form a plurality of first reaction products, and wherein said detecting separately detects each of said plurality of said first reaction products, and wherein each of said plurality of said primary amino acids in said sample is specifically detected.

Support for the above subject matter is found *inter alia* in original claims 1, 4, and 17. See also Example 1, p. 68, paragraph 267, lines 14-16. Support for this subject matter is found *inter alia* in paragraph 22 at p. 6 and paragraph 28 at p. 9, which each sets forth the 20 primary amino acids and in Figure 1A.

Claim 18 would be amended to recite

The method of claim 17, wherein the detecting is quantitative and the amount of each primary amino acid of said plurality of primary amino acids in said sample is thereby determined.

Support for this subject matter is found *inter alia* in paragraph 22 at p. 6 and paragraph 28 at p. 9, which each sets forth the 20 primary amino acids and in Figure 1A.

Claim 21 would be amended to recite "each of said plurality of aminoacyl tRNA synthetases is located at a known locus." Support is found *inter alia* in the previous version of the claim.

Claim 22 would be amended to correct an antecedent basis and recites "wherein each of said plurality of first reaction products is labeled and said detecting is by means of detecting said label." Support is found *inter alia* in original claim 22 and original claim 21.

Claim 23 would be amended to change its dependency from claim 17 to amended claim 13 to provide a proper antecedent basis for "synthetases" and also for clarity. Support for the amendments is found *inter alia* in original claim 23.

Claims 24 and 40 would be amended to recite " wherein the detecting is quantitative and the amount of said primary amino acid in said sample is determined. " Support is found *inter alia* in paragraph 22 at p. 6, paragraph 43 at p. 10, and in Figure 1A.

Claim 25 would be amended to replace "said" with "an" to correct an antecedent basis. Support is found *inter alia* in the original version of the claim.

Claim 27 would be amended to insert a comma between "25" and "wherein" to correct punctuation.

Claim 51 would be amended to correct an antecedent basis and would recite "wherein said complex is contacted with an elongation factor to form a ternary complex and said ternary complex is detected using a ternary complex probe." Support for this subject matter is found *inter alia* in the original versions of claims 3, 31 and 51.

Claim 53 would be amended to depend from claim 51 which provides a proper antecedent basis for the recital of the "ternary complex probe." Support for this subject matter is set forth *inter alia* in the original versions of claim 53 and original claim 51.

Claim 56 would be amended to add a second recital of "or spatially separated tRNAs."
Support for this subject matter is found *inter alia* in the original claim 56.

Claim 57 would be amended to replace "or" with "and" to provide a proper Markush format. Support is found *inter alia* in the original version of the claim.

Claim 95 would be amended to replace the mark "Texas Red" with the term "sulforhodamine 101 sulfonyl chloride" for the purpose of correcting trademark usage related to the mark as requested by the Examiner. As noted above, one of ordinary skill in the art would understand that TEXAS RED as used in the specification is sulforhodamine 101 sulfonyl chloride (*see* enclosed page from Sigma catalog).

New claim 103 would depend from claim 56 and recite:

The array of claim 56, wherein the array is formatted as a microparticle, microbead, microsphere, microspot, microwell, or microfluidic array.

Support for the above subject matter is found *inter alia* in the specification at p.27, paragraph 136, line 30 and at p. 9, paragraph 41.

In light of the above, Applicants believe the proposed amendments to the claims add no new matter and respectfully request their entry.

Response to Rejection of Claims 1, 3, 22, 25, 51, 57, and 95 under 35 U.S.C. §112, second paragraph, as being allegedly indefinite.

A. "PPi"

Claims 2 and 57 were rejected on the grounds that the recital of "PPi" was indefinite. However, while PPi may have another meaning, in light of the specification and the context of the claims, Applicant believes the meaning of PPi as denoting inorganic pyrophosphate is definite and not reasonably subject to interpretation by one of ordinary skill in the art as "proton pump inhibitor."

However, in order to expedite prosecution, Applicant has amended the claim to recite "inorganic pyrophosphate" in place of PPi.

B. "AA-AMP"

Claims 3, 25 and 57 were rejected for alleged indefiniteness on the grounds that the recital of "AA-AMP" was indefinite. Similarly, and without acquiescing to the position of the Examiner and in order to expedite prosecution of the application, Applicant has amended the claims to recite "aminoacyl-adenosine monophosphate" in place of AA-AMP.

C. "Said Second Product"

Claim 22 was alleged to be indefinite for reciting "said second product" which lacked an antecedent basis. Applicant has amended the claim to provide a proper antecedent.

D. "Said Ternary Complex"

Claim 51 was alleged to be indefinite for reciting "said ternary complex." Claim 51 would be amended to provide a proper antecedent basis for the term "ternary complex":

The method of claim 3, wherein said complex is contacted with an elongation factor to form a ternary complex and said ternary complex is detected using a ternary complex probe.

E. "Texas Red"

Claim 95 recited a trademark term "Texas Red." Applicant has amended the claim to recite "sulforhodamine 101 acid chloride" instead.

In view of the above, Applicant respectfully requests reconsideration and withdrawal of the rejections for indefiniteness under A-E above.

Response to the rejection for alleged anticipation by Ed Shipwash, *Physics*, Vol. 1, pp. 1-21 (August 10, 1999), under 35 U.S. C. §102(a).

As noted by the Examiner, 35 U.S.C. 102(a) provides:

A person shall be entitled to a patent unless –
(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent.

MPEP §716.10 (revision 1, February 2003) states at p. 700-250, first column that

An uncontradicted "unequivocal statement" from the applicant regarding the subject matter disclosed in an article, patent, or published application will be accepted as establishing inventorship. *In re DeBaun*, 687 F.2d 459, 463, 214 USPQ 933, 936 (CCPA 1982). However, a statement by the applicants regarding their inventorship in view of an article, patent, or published application may not be sufficient where there is evidence to the contrary.

Applicant provides an Affidavit from the inventor, Ed Shipwash, providing an "unequivocal statement" that Dr. Shipwash is the sole inventor of relied upon subject matter of the above Ed Shipwash reference.

In view of the above, Applicant submits that the above Ed Shipwash reference is no longer applicable under 35 U.S.C. 102(a). Applicant therefore requests that the above reference be reconsidered and withdrawn.

Applicant also notes that the above cited reference was published on August 10, 1999 and the earliest priority date of the present application is August 10, 2000. Thus, the Ed Shipwash reference was not published more than one year before the earliest priority date of the present application and therefore is not prior art under 35 U.S.C. 102(b).

Response to the rejection of Claim 39 as allegedly unpatentable under 35 U.S.C. §103(a) over Shipwash in view of VWR International "Molecular Size Exclusion Chromatography", pp. 1-2 (2000).

As discussed above, the Ed Shipwash reference is not applicable under 35 U.S.C. §102(a) or (b). Applicant therefore requests that the above rejection be reconsidered and withdrawn.

Response to the rejection of Claim 95 as allegedly unpatentable under 35 U.S.C. §103(a) over Shipwash in view of Demandolx Microscopy and Analysis, 48:1-9 (1997).

As discussed above, the Ed Shipwash reference is not applicable under 35 U.S.C. §102(a) or (b). Applicant therefore requests that the above rejection be reconsidered and withdrawn.

Appl. No. 09/927,424
Amdt. dated August 8, 2003
Reply to Office Action of March 14, 2003

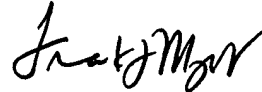
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CONCLUSION

In view of the foregoing, Applicant believes all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 925-472-5000.

Respectfully submitted,



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